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CONNECTICUT

ENVIRONMENT



The Citizens' Bulletin of the Connecticut Department of Environmental Protection



Captain Kidd's Treasure

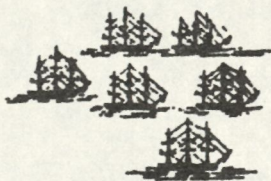
The search goes on.

July/August

1988

CONNECTICUT
ENVIRONMENT

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Cover by Michael D. Klein

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Editor's Note

We finally did it. You are now holding in your hand the very first issue of the Connecticut Department of Environmental Protection's monthly magazine, *Connecticut Environment*. We think our new name, *Connecticut Environment*, is a more appropriate and clear reflection of who we are (not the editorial we here, but you, me, the DEP, and everybody else who cares about what kind of a world our children will inherit) and what we're doing. We (back to the editorial mode now) think it's stronger and simpler. We hope you like *Connecticut Environment*, and that the initial period of adjustment is short.

That's the good news. The bad news is that the price went up. We are now \$6 for one year, and \$11 for two years. Inflation. World cycles. The price of tea in China. You know the story. One of the big things — maybe the biggest thing — we are trying to do with this magazine is to put together something which is, by all the saints, not a rip-off. You get ripped off enough. In case you haven't noticed. The DEP and this magazine are not in the business of ripping anybody off. We want you to get the best of this deal. Incredible, I know, but the truth. We think, even with the price increase, the reader is still getting a good deal. In fact, if you think you *aren't* getting a good deal, the chances are you *aren't* holding the *Citizens' Bul. . . err, Connecticut Environment*. Accept no substitutes.

On Thursday, May 26, 1988, Ted Barbieri died. Because of his fundamental decency, compassion, and respect for man and nature, our state is a better place. The heart of the DEP goes out to Ted's family. R.P.



Captain William Kidd continues to inspire treasure hunters along Connecticut's shoreline. (Nineteenth century drawing from The Crimson Book of Pirates by Peter Newark.)

Connecticut's Favorite Privateer

Captain Kidd continues to fascinate after 300 years

by

Laura J. Blake

Environmental Intern

OUR COUNTRY'S EARLY HISTORY, and certainly that of Connecticut, is a story of good and responsible people who lived their daily lives and founded their government according to serious and fundamental principles. Later, however, in the second and third century after the first whites set foot on the Atlantic coast, things started to get interesting. At the same time mainstream

society became more stable, it also began to spawn a counter-culture of its own, the criminal class, the demi-monde. Unusual characters started to appear. Things became more colorful.

One such character was Captain William Kidd, whose name even now has the power to stir excitement and mystery. According to legend, the infamous Captain Kidd



*Articles of Agreement made & concluded
upon this tenth day of September Anno 1696.
Between Cap^t William Kidd Commander of the good ship
Adventure Gally on the one part. And John Under
Quartermaster to the said ship Company on the
other part as followeth Viz^t*

*That the above said Cap^t William Kidd shall receive the
above said ship (he finding the said ship in want of) thirty five
shares. And also five full shares for himself this Commission
of high Treason, Robbery and Merchandise as shall come to
him to be taken by the said ship and Company by sea or land.*

*That the Master for his care shall receive two
shares of all such Treasures, and the Cap^t shall allow all
the other Officers a gratification above their own shares
out of the ship shares as the said Cap^t or other in his place
shall seem reasonable.*

*That the above ship Company do oblige themselves
to pay out of the first money or Merchandise taken for all
such Expenses as were received on board the said ship
in the Town of Providence according to the Trade and Bill.
And for such Provisions the said William Kidd shall have
time to time purchase for victualling the said ship &
Company in America or else where the said ship
Company do oblige themselves to pay for the said Pro-
visions such Advances as shall be received by the In-
habitants of the places where the said Provisions shall
be purchased.*

*That the said ship Company shall out of the first pro-
ceeds taken after the victualling of the said ship pay for
the Surgeons Chest and ship debts by the said voyage
contracted.*

*That if any Man shall lose an Eye, Leg or Arm or
the*

The first page of the articles granting Captain Kidd the right to plunder enemy ships. (From Outcasts of the Sea by Edward Lucie-Smith.)

sailed the East Indian seas, accumulated immense treasure, and left witnesses — to the extent that he *did* leave witnesses — quaking with fear. Tales of his dark deeds abounded; he was known as a cruel torturer, a madman. The power of his name still can inspire treasure hunters, who leap at the chance to discover the buried riches of Captain William Kidd.

How this solid and respected New World businessman became “king of the buccaneers” is a story filled with politics and intrigue, the stuff that legends are made of. Captain Kidd ended his days at the gallows, in London, protesting his innocence to the last. Kidd went to his grave leaving more than a few unanswered questions.

LOOTING ON THE HIGH SEAS increased when Pope Alexander VI officially divided the newly discovered land in the East and West Indies between Portugal and Spain. England, the Netherlands, and France countered this move by offering commissions to anyone capturing a Portuguese or Spanish ship. Off went the first buccaneers, who were regarded not as thieves or criminals, but as heroes. One of the most famous of these daring entrepreneurs was Sir Francis Drake. English papers abounded with accounts of the bold exploits of the buccaneers, who swaggered through the streets amidst the adulation of the crowds.

By 1695, however, the number of buccaneers had increased so dramatically — everybody wanted to get into the act — that they came to be regarded as a threat. Hundreds of them were thought to be gathered off the coast of America, near Providence. Many others were near the Cape of Good Hope in Madagascar. There they built elaborate fortresses with labyrinthine passageways, which kept the pirates' lairs well concealed from any who dared to enter uninvited. Carefully planted thorn bushes discouraged barefooted natives.

King William III of England had clearly perceived the buccaneers as a threat to his country's economy. As a group, the buccaneers were powerful enough to overthrow colonies, ransack missions, and extract enormous ransoms for hostages. The buccaneers were a serious drain on an already sagging English economy, an economy that was paying for a war with France. The king called upon his new governor of New York, the Earl of Bellomont, to find some solution to the buccaneer problem. His idea was to finance a venture that would not only confiscate treasure, but rid the seas of some of the worst pirates. Upon the recommendation of his friend Robert Livingston, Captain William Kidd was contracted to lead the venture.

Kidd was generally considered to be a “home-loving citizen of New York with a wife and family.” His achievements in defending the coast from pirates in Massachusetts were already well documented; he knew names, faces, and the territory in general. Kidd and Livingston both contributed to the funding of the venture, thereby investing in whatever profits it might bring. Profits were to be split according to the investment made, with the king receiving 10 percent. Kidd was presented

with the ship *Adventure Galley* and two commissions from the king. One empowered him to attack and bring in enemy (i.e., French) ships; the other, unlike that of any buccaneer before, gave him "full power to apprehend, seize, and take into custody" any pirate for the good of the state.

IN 1696, THE *ADVENTURE* SAILED from Plymouth to New York, where it took on provisions and a crew of 150 men. From New York, Kidd set sail for ports near the Cape of Good Hope, where he knew the most treasure could be found. The nine-month trip was, in fact, a violation of his contract, as he was not to venture past waters in the Americas. The long voyage diminished the ship's resources. Kidd no doubt hoped that in venturing this far, the profits would far outweigh any minor violations of his agreement. Unfortunately, upon reaching Madagascar, he realized the pirate fleet was long gone; the crew, having lived for months on promises, became restive.

It was just at this point that Kidd happened upon a French ship; the captured provisions kept Kidd's expedition going. Furthermore, this capture was well within the limitations of his contract, and could be considered a feather in the cap of the English politicians.

And then, things get a little murky. At his trial, Kidd claimed that the crew turned mutinous, and he no longer had control over his own craft. Whoever was responsible for the final decision, the fact was the *Adventure* did turn pirate. When a small fleet of 15 ships was spotted sailing toward the Red Sea, the decision was made. From then on, there was no turning back. Although the ships flew the flags of Holland and England, the *Adventure* moved in on a smaller ship of the fleet and engaged her. Kidd's attack, however, was fended off by a larger warship.

In some desperation, Kidd then attacked another small vessel, but again failed to come up with treasure, even after torturing the captured crew. The next forays of the *Adventure* were more successful. The most famous was the capture of the *Quedagh Merchant*, a ship worth over \$320,000 in Madagascar. Kidd later claimed this act was consistent with his original commission from the king. The owners of the *Quedagh* saw it as nothing less than a deliberate act of piracy. Criminal charges against Kidd were made in the Colonies and in England for piracy, as well as for the murder of one of his own crew. The murder charge involved an incident with one William Moore, who allegedly refused one of Kidd's orders at sea. Kidd, known to be a man of strong emotions, picked up a bucket and smashed it across Moore's skull. Moore died the next day from resulting injuries. The name Kidd was no longer synonymous with hero, but with piracy and treachery on the high seas.



The murder of William Moore, for which Kidd later hanged. (From The Crimson Book of Pirates)

IN APRIL OF 1699, THE *QUEDAGH* dropped anchor in Anguilla, West Indies, and it was there that Kidd learned he had been declared a pirate. He was the single

exception to a general pardon issued to all pirates in Atlantic waters. Kidd decided his only hope was to reach the Earl of Bellomont, one of the original backers of the venture, with proof of his French capture and enough treasure to guarantee a pardon.

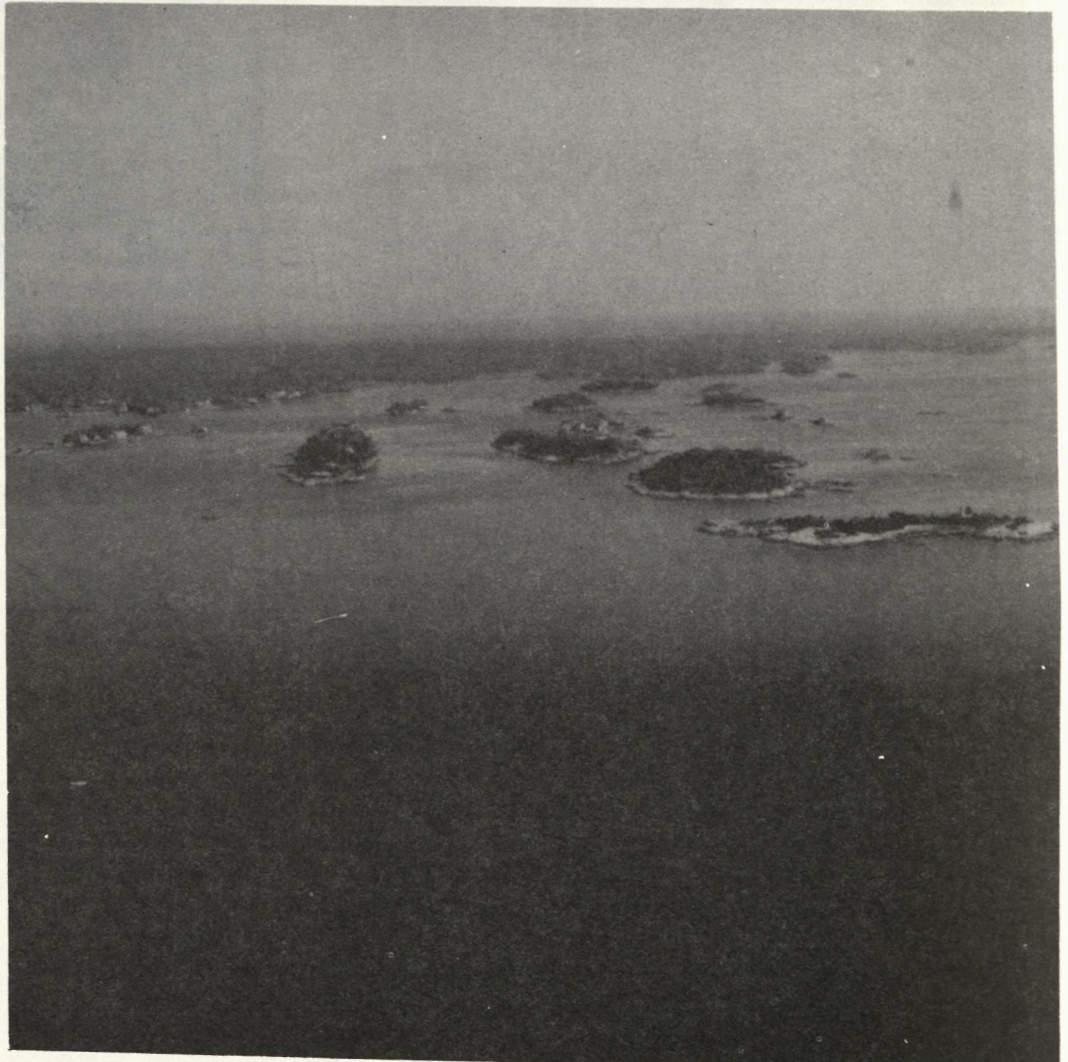
Kidd abandoned the *Quedagh* and headed up the Atlantic coast to Boston in a small sloop. He hoped to find Bellomont. Not daring to enter any harbor, Kidd cruised through Long Island Sound and along the Connecticut shoreline. Later, small quantities of treasure were found in Kidd's sloop. This led to speculation that during this period Kidd had buried treasure at the Thimble Islands and other places along the Connecticut shoreline.

Because of the political intrigue which surrounded Kidd and his exploits, his story was reported by many periodicals of the day. When Kidd finally dared to set foot in Boston, he was arrested and brought to England to be tried on five counts of piracy and one of murder. At the Old Bailey in London, in his worst hours, Kidd's old friends deserted him; it was now politically unwise to be associated with Captain William Kidd. Even though Kidd was left to fend for himself at his trial, he refused to

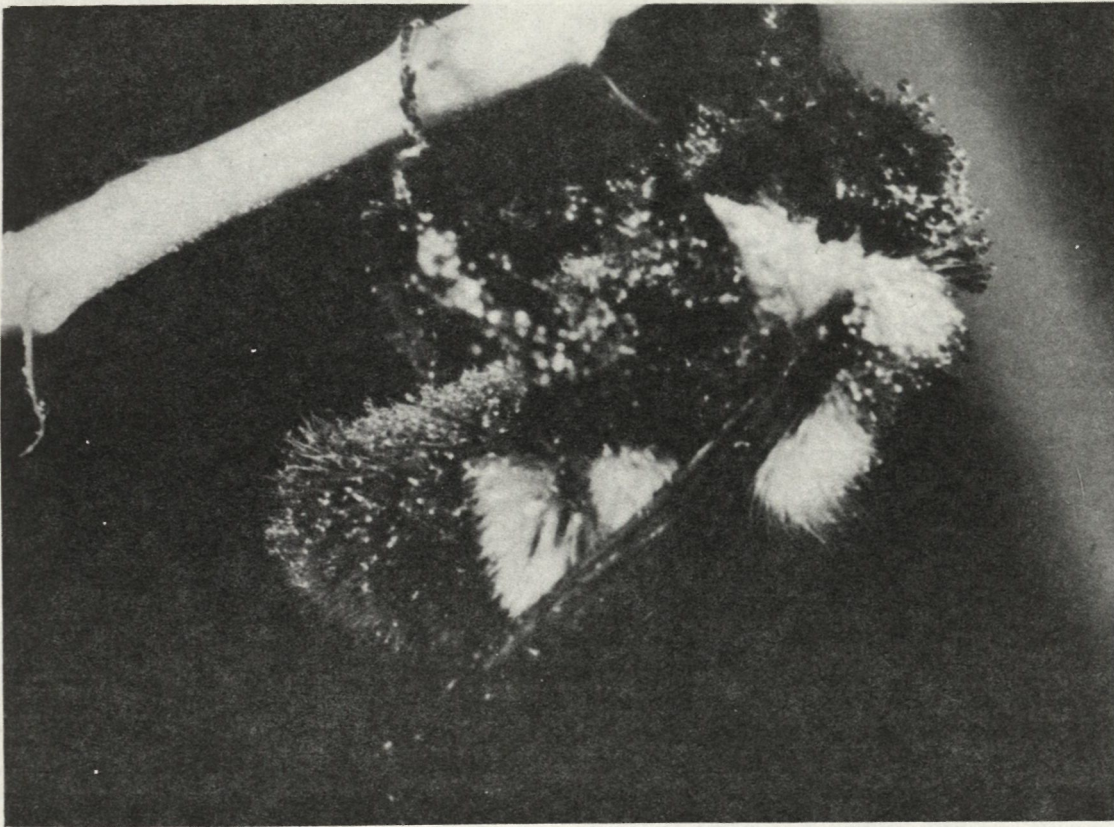
identify any backers of the *Adventure* and continued to claim his innocence.

IT HAS BEEN ALMOST 300 YEARS since Captain William Kidd sailed through Long Island Sound, yet the power and mystery his name evokes are as strong as ever. People are still digging along the shoreline, people who are sure they know exactly where Kidd buried his vast treasures. Every few years, a new guess is made as to where Kidd spent those last days as a free man. Every few years, someone comes up with a new map.

There are many dimensions to the Connecticut mind. We have sophistication, a rich cultural heritage, natural beauty, rivers, forests, wildlife, seashore. We have men and women of achievement who have brought honor and distinction to themselves and to the state. And we have, clanking around somewhere in the back of our staid New England psyche, Captain William Kidd, coldly blowing the brains out of the only living witness to the buried treasure. And somehow, as Dorothy said to the scarecrow, I think we love him most of all. ■



The Thimble Islands, right off Branford, are considered to be a good bet for seekers of Captain Kidd's treasure. Good luck. (Photo courtesy DEP's Coastal Management Program.)



Bumble bee sleeping and covered with dew. Photographed in August in Bethlehem, Connecticut. (All Photos by Carl W. Rettenmeyer.)

Perchance to Dream

An inquiry into the sleeping habits of insects

by

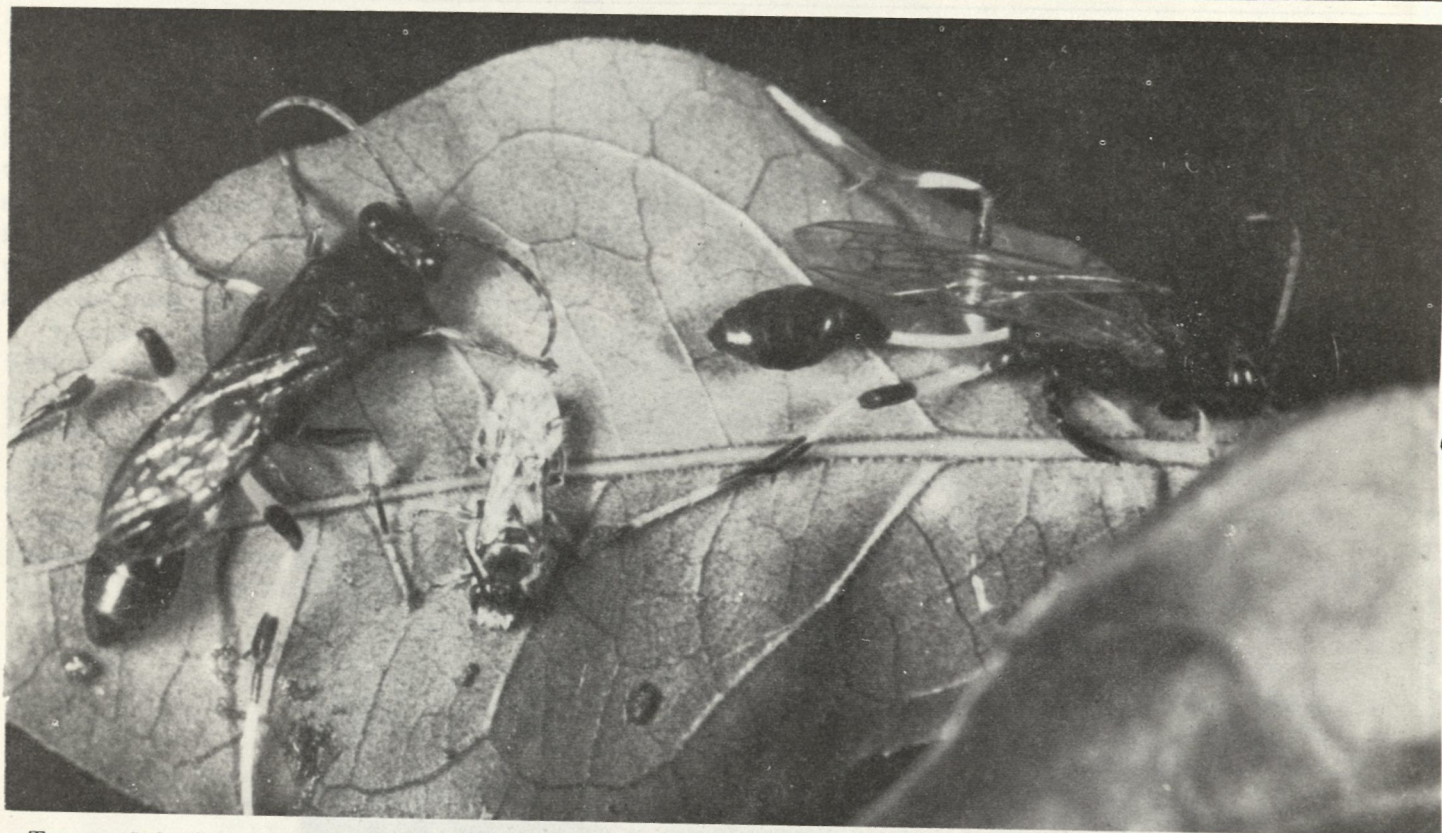
Matthew Perkins

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The University of Connecticut and
The Connecticut State Museum of
Natural History

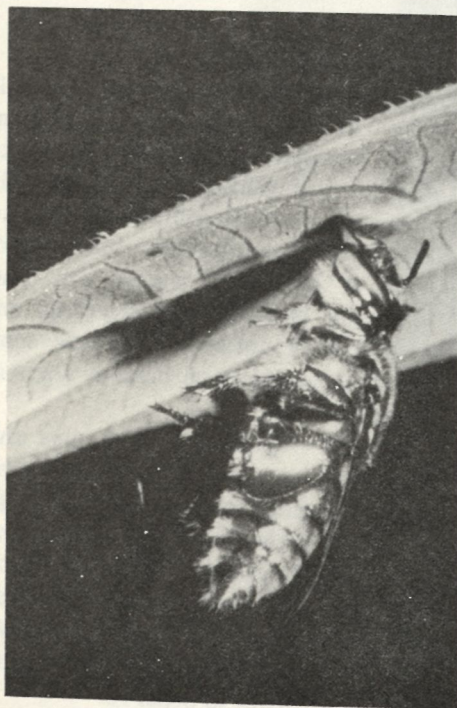
IMAGINE SLEEPING, sound as a log, holding onto a branch by only your teeth. Most people couldn't hang from a branch for hours while awake, never mind while sound asleep. The performers who accomplish such feats are insects, particularly many varieties of bees and wasps. The phenomenon is considered sleeping, and people have noticed it because some bees and wasps have bizarre ways of going about it.

Sleep — something that most animals seem to need — is also needed by insects. Among these insects are the 20,000 varieties of bees and 80,000 varieties of wasps. Most of these insects may sleep, but have not actually been seen or described while sleeping. However, some sleeping species are particularly interesting to observe.

INSECTS SLEEP in interesting places, such as on blades of grass,



Two mud-dauber wasps sleeping with a bee on a leaf. This was photographed in the Serengeti of Tanzania, but similar mud-daubers also live in Connecticut. Sleeping groups are interesting because unrelated or distantly related bees and wasps sleep on the same plant.



Orchid bee sleeping while holding onto vein of leaf by mandibles. Note none of legs is touching the leaf. Photographed in Ecuador.



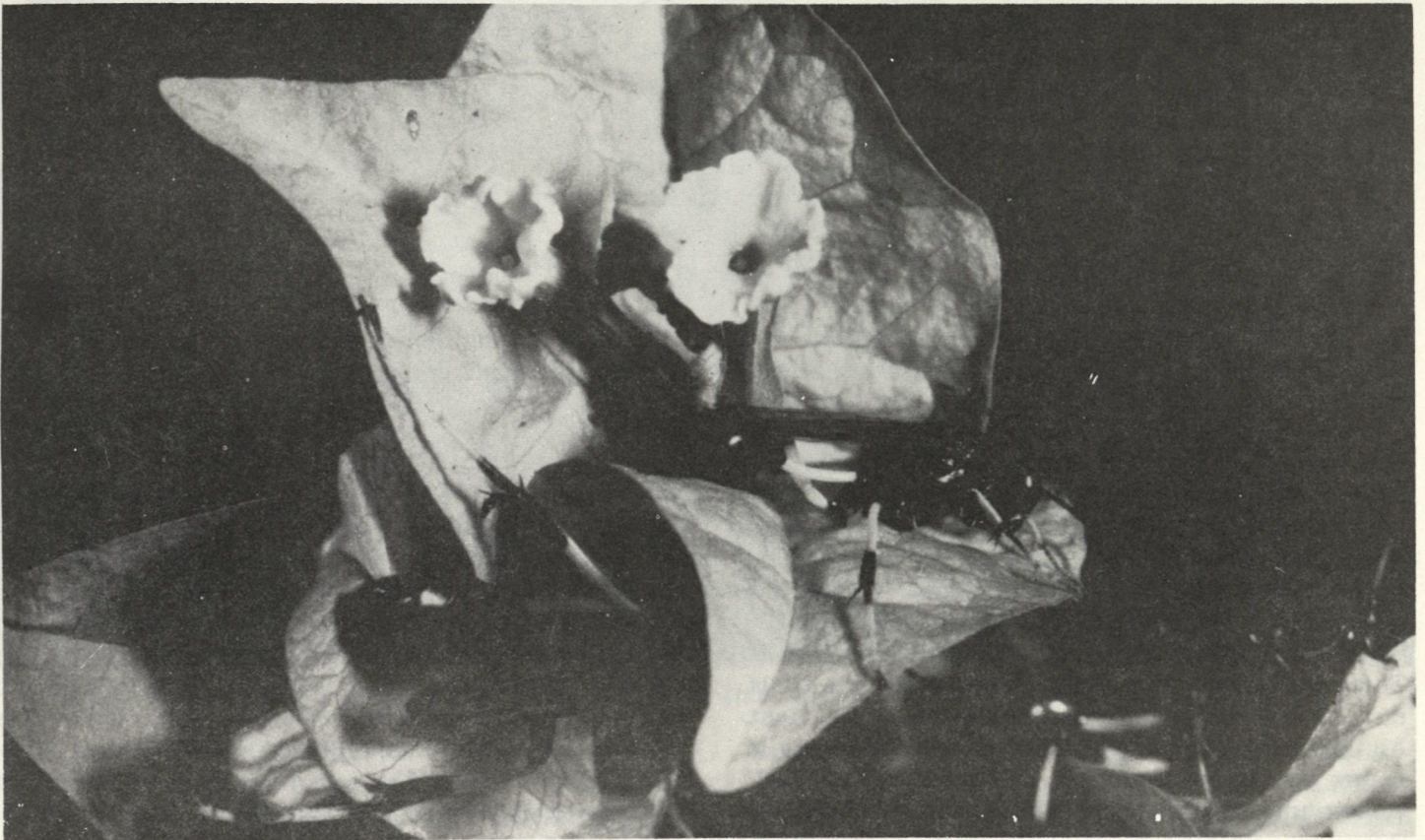
Sleeping orchid bee holding onto midrib of leaf. Note the long tongue (sometimes mistaken for a stinger) extending behind its body. Photographed in Ecuador.

hanging from ceilings of sheds or barns, tucked inside flowers, or in their own nests.

Their positions, too, are varied. A most interesting position may be seen when certain creatures are sleeping on a thin twig or a thick blade of grass; the insect holds onto the stalk with its jaws, or mandibles, while its legs hang free.

Other insects wrap themselves around a vertical stalk, like a doughnut. Bees and wasps stick their heads inside one of the many hexagonal cells of the nests of their colonies. They may also hold onto their nests with their legs.

Bees and wasps vary in their sleeping patterns as well. For example, some species will sleep in groups, using up only a small portion of a large field for several hundred sleeping insects. In some extreme cases, numerous insects can be seen on the same branch, creating a dense cluster of snoozing bugs. On the other hand, some species are soli-



Three mud-dauber wasps can be seen sleeping on the "flowers" of Bougainvillea. Several dozen wasps were sleeping on this same plant in the Serengeti of Tanzania.

tary sleepers, with bees sleeping inside of flowers that close up for the night.

One of the most peculiar habits of these insects is that many sleep in the same location, night after night, for no apparent reason. In a vast field of grass, how an insect can find its particular weed or blade of grass to sleep on baffles scientists.

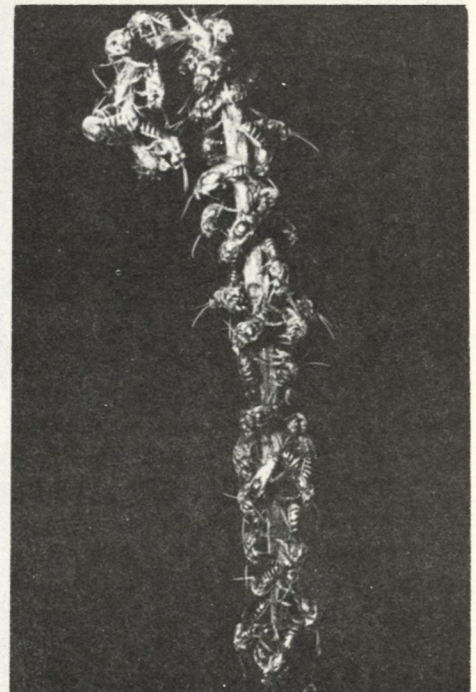
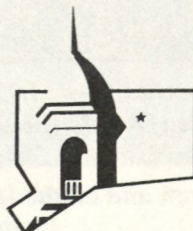
For the most part, insects sleep at night, and usually all night. The little nappers sleep soundly, too. Flashlights and movement are unable to wake them. In fact, there are reports of bees clinging with their teeth to their perches so tightly that they have been decapitated by heavy rain. This shows both the clinging power and the deep sleep of the insects.

This deep sleep allows for easy observation. According to Dr. Carl Rettenmeyer, an entomologist and director of the Connecticut State Museum of Natural History, one of the best times for people to look closely at these

insects is while they're sleeping.

At these times, the insects are out in the open and can be photographed with bright lights, looked at with flashlight, and even brought back home by cutting off the plant.

AS WITH SO MUCH about the world of insects, relatively little is known about this phenomenon of insect sleeping. It is something that you can observe right in your own back yard, and you may be able to make many new discoveries about sleeping insects. That's the great thing about the natural world — it's happening all the time, and all people have to do is open their eyes and experience it.



More than 60 sweat bees were found sleeping on this single plant stem in Costa Rica. Related bees can be seen in Connecticut fields or roadsides.

A Visit to Roaring Brook Nature Center

by
Steven S.W. Fletcher
Writing Intern
Department of Renewable
Natural Resources
The University of Connecticut

THERE ARE FEW AREAS LOVELIER than rural Connecticut in summer. Maybe it's the lushness of the greenery, the symphony of bird songs, the faint buzzing of insects, or a combination of them all. All these sounds, scents, and sights occur in concentrated form at one location in the greater Hartford area — Roaring Brook Nature Center. Here, adults and children can learn about nature first-hand, by hearing, smelling, and seeing.

Located in Canton, 30 minutes west of Hartford, Roaring Brook Nature Center is situated adjacent to 100 acres of state forest land, donated by the Werner family. Through these woodlands meander nine separate trails, each offering a unique perspective on the environment. An interpretive building contains exhibits pertaining to nature and native American culture, a lecture hall/auditorium, and a gift shop. There is also a rehabilitation

area for sick and injured animals, which are cared for by the Center's staff and volunteers.

THE DIRECTOR OF THE CENTER is Jay Kaplan, whose background includes a bachelor's degree in environmental education from Cornell, and a master's degree in outdoor education from Pennsylvania State University. The staff under Kaplan is a tightly-knit, dedicated group, with four full-time naturalists: Gail Johnson, who has been with the Center since 1975; Gail Coolidge; Beth Dal Negro; and Lorraine Wolpert, who runs the gift shop and is in charge of the acid precipitation monitor. The Center is also fortunate to have a well-organized auxiliary force — a pool of eager volunteers ready to work at the Center in a variety of capacities.



At Roaring Brook Nature Center in Canton, children and adults learn about the natural world first-hand. (Photos courtesy Roaring Brook Nature Center.)



The philosophy behind Roaring Brook Nature Center is that education is the key to our environmental future.

ROARING BROOK NATURE CENTER began 40 years ago as the brainchild of Una Riddle, who wrote, "In the summer of 1948, with six children and an old chicken house, I started a nature center and museum. I thought that possibly my love of nature might help these children to appreciate what was all about them."

Today, Director Jay Kaplan hopes to expand the Center by adding wildlife rehabilitation and classroom space. Plans for the future cannot, however, be realized without funding. The Nature Center is a non-profit, private organization that receives money from membership dues, class fees, gift shop sales, donations, and through its affiliation with the Science Museum of Connecticut.

A primary goal of the Center is to teach young people about the natural world. One of the ways this is achieved is through special programs for area schools. These programs, ranging one to two hours in length, cover seasonal topics and complement ongoing in-classroom science curricula. In spring, there is a program on the insect world, while during the winter months, another program explores animal tracks and trails. In the summer months, the Center operates a series of educational programs similar to day camps. This summer, the classes range from exploring Connecticut by canoe to discovering the secrets of the forest. These programs are geared toward students from pre-school through 10th grade. In addition to programs offered at the Center, members of the teaching staff also travel to schools throughout the state. During the 1987-88 school year, over 15,000 students received science enrichment in this fashion.

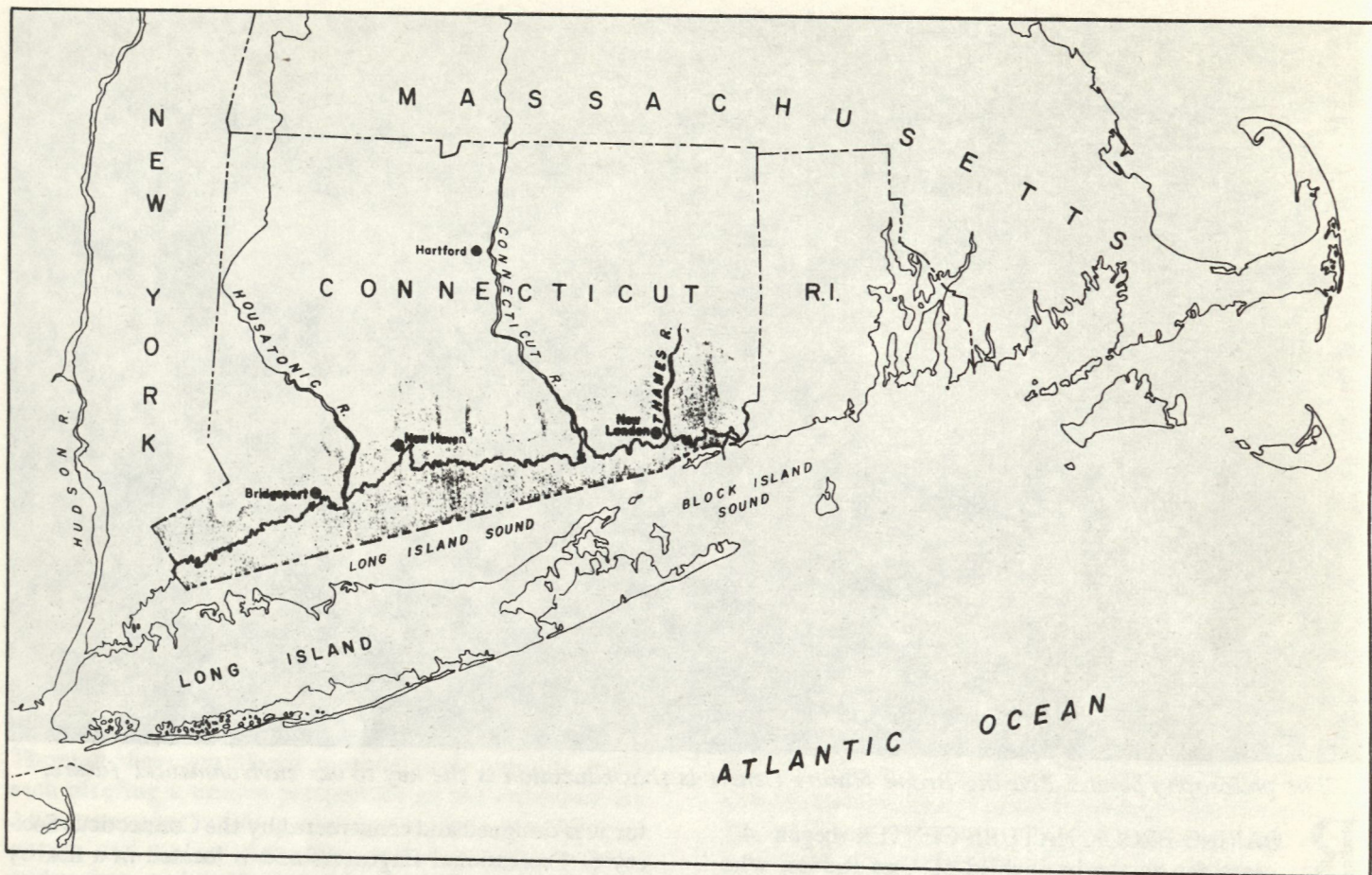
The Center also maintains the only privately-operated acid precipitation monitor in the state. The moni-

tor was designed and constructed by the Connecticut Society of Professional Engineers and is located in a nearby field owned by the Jepsen family. Two volunteers from the Society check the apparatus each week and work in cooperation with Lorraine Wolpert in collecting data. The results are then correlated with three DEP-operated monitors located elsewhere in the state.

Roaring Brook Nature Center is an educational tool designed to allow children and adults the chance to learn from experienced teachers the wonders and importance of the natural world. "We view environmental education as crucial to the future of Connecticut," says Jay Kaplan. "It's important that people of all ages begin to understand the environment that surrounds them."

Directions to the Center are: From Hartford, follow Route 44 west to Canton. At the junction of Route 177, turn right onto Lawton Road. Bear left at first fork, turn right at first stop sign, then left onto Gracey Road. The Nature Center is one half mile ahead on left. The summer hours for the Center are: Mon-Sat: 10 a.m. to 5 p.m. and Sun: 1 p.m. to 5 p.m. Admission is: adults \$2.00 and children/seniors \$1.00. For further information, please phone (203) 693-0263.





The Bottom Line

There was a time when
beachfront property in Connecticut
was very, very reasonable

Reprinted from
A History of Connecticut's Coast

WHEN THE ENGLISH ARRIVED on Connecticut's shores, they were extremely meticulous about their land purchases; they made the Indians sign contracts, demanding that everything be kept strictly legal, despite the fact that the price they paid for acres of prime land was ludicrously small. In some cases, the Indians who signed these fateful documents did not understand that they were giving up their hunting, fishing, and planting

rights to the lands they sold; they had no concept of private property and believed they were merely sharing the land with the newcomers. In other cases, however, Indians gave land outright to the English as a means of protecting themselves from hostile tribes.

Everyone knows the story of Peter Minuit, who bought Manhattan for goods worth \$24; the Connecticut coastline was only a little more expensive:

Greenwich — Greenwich Point was called Monakewego by the Mianus tribe, and later Elizabeth Neck after Elizabeth Feaks from the New Haven Colony, said to have made the purchase for "25 fine coats."

Stamford — Captain Nathaniel Turner of the New Haven Colony bought the land known as Rippowams for a number of hats, coats, and blankets.

Norwalk — The area is named after Naw-eu-wok, the sachem who sold the land to Roger Ludlow for "10 scissiors, three kettles, some coats, hatchets and hoes, and 10 Jew's harps."

Stratford (Pequonnock) and *Fairfield* (Uncoway) — These lands were sold to Roger Ludlow for wampum, a few coats, some hatchets, spades, looking glasses, Jew's harps, hoes, and kettles. The Indians, seeking protection from the Mohawks, and witnessing the English defeat of the Pequots in Fairfield, paid the settlers an annual bounty of furs and corn.

New Haven — On Novemeber 24, 1638, the local sachem, Momaugin, sold all the land in Quinnipiac, reserving hunting and fishing rights in return for "12 coats of English trucking cloth, 12 alchemy spoons, 12 hatchets, 12 hoes, and two dozen knives and scissiors."

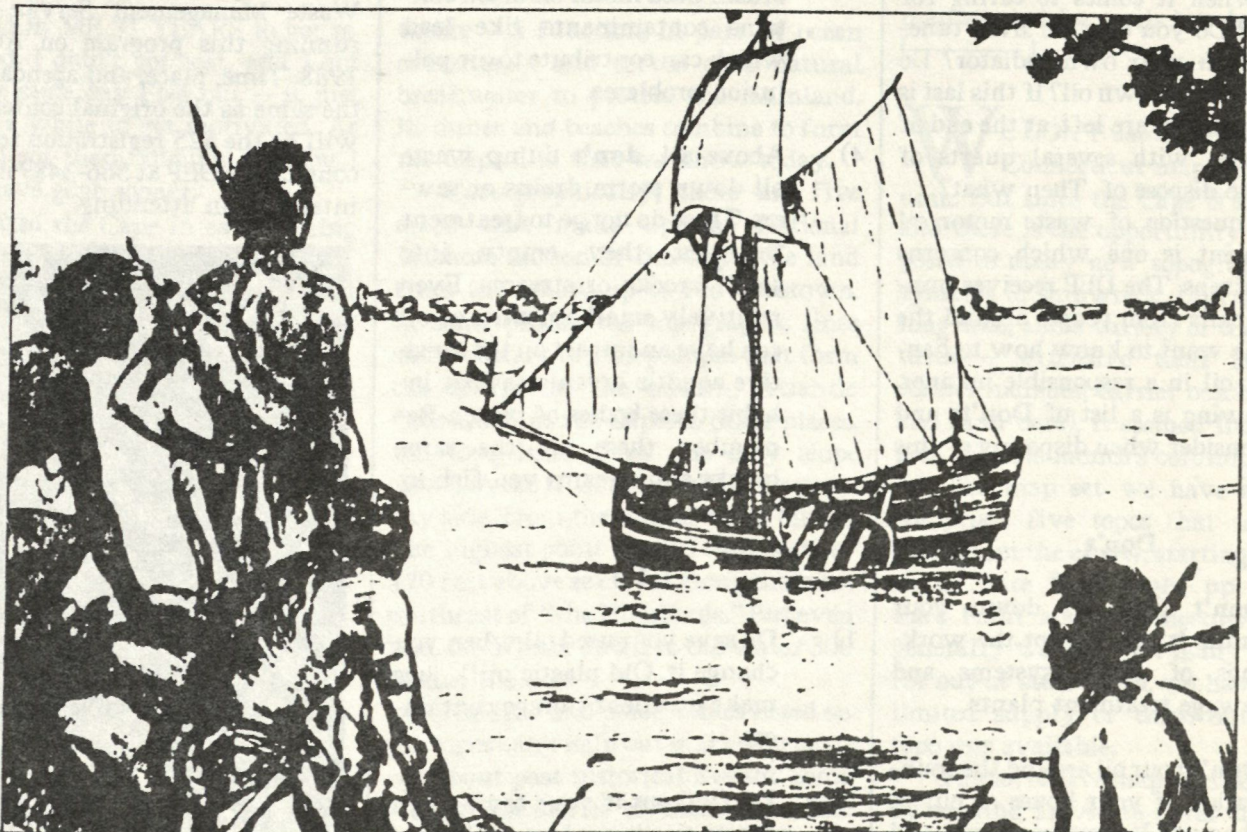
Branford — The deed of purchase in 1639 stipulates that should the Indians "become affrighted ... they may repair to the English plantation for shelter, and that there in a just cause ye English will endeavor to defend ye from wrong."

Gulford — The sachem queen of the Menuncatucks sold all the land from Kuttawoo (East River) to Oiockommuck (Stony Creek) for "12 coats, 12 fathom of wampum, 12 glasses, 12 pairs of shoes, 12 hatchets, 12 pairs of stockings, 12 hoes, four kettles, 12 knives, 12 hats, 12 porringers, 12 spoons, and two English coats."

Norwich — For nine square miles of land, John Mason and Thomas Tracy paid Uncas, Owanero, and Attawanhood "the full and just sum of 70 pounds."

New London — At a general court held in Boston in 1646, John Winthrop Jr. appointed a commission "to remove such as Indians as were will to the other (or east) side of the great river (Thames), or some other place for their convenient planting and subsistence, to the good liking and satisfaction of the said Indians."

(This article was reprinted from *A History of Connecticut's Coast*, a publication of the DEP's Coastal Area Management Program. Copies of this publication are available free of charge from DEP Planning/Coastal Management, 71 Capitol Avenue, Hartford, CT 06106.)



Manhattan went for \$24; Connecticut coastline was a little more expensive. (Illustration courtesy the Travelers Insurance Co., Htfd.)

For Your Information



The correct disposal of waste motor oil is a major concern for many Connecticut residents. (Photo by Leslie Lewis.)

A Few Dos and Don'ts

by
Leslie Lewis
Citizens' Participation
Coordinator

ARE YOU A "do-it-yourselfer" when it comes to caring for your car? Do you do your own tune-ups or flush your own radiator? Do you change your own oil? If this last is the the case, you are left, at the end of the process, with several quarts of used oil to dispose of. Then what?

The question of waste motor oil management is one which concerns many citizens. The DEP receives hundreds of calls from people around the state who want to know how to handle their oil in a responsible manner. The following is a list of **Don'ts** and **Dos** to consider when disposing of this material:

Don't

- 1) **Don't** pour oil down your drain. It can disrupt the workings of septic systems and sewage treatment plants.
- 2) **Don't** pour oil around the foundation of your house or out in the yard. It may seep down and contaminate groundwater supplies.

- 3) **Don't** use waste oil to burn brush. Used motor oil often contains contaminants like lead which can contribute to air pollution problems.
- 4) Above all, **don't** dump waste oil down storm drains or sewers. These do not go to treatment facilities; they empty into small brooks or streams. Even relatively small amounts of oil can have an impact on the sensitive aquatic organisms that inhabit these bodies of water. Remember, these are the same brooks and streams you fish in.

Do

- 1) **Do** save your used oil when you change it. Old plastic milk jugs make excellent storage containers.
- 2) **Do** find out if your town has a waste oil disposal tank. Contact your public works department to find out where it is and

when it is available to the public.

- 3) If your town doesn't collect oil, **do** find out if your local service station or car care center will take it for you.

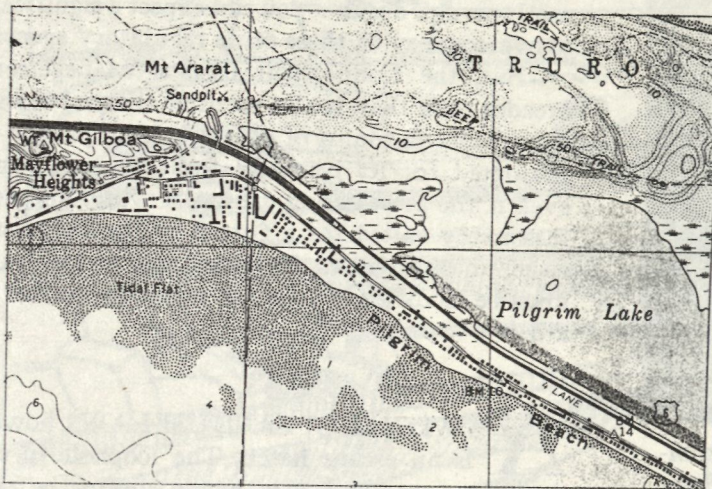
Unfortunately, not all towns have waste oil collection tanks. By 1991, however, this oil will be prohibited from disposal in landfills or resource recovery facilities. You can urge your local officials to develop a waste oil collection program if one is not already in place. The DEP can provide technical assistance to communities which are interested in developing an oil collection program. For more information, contact the DEP at 566-4869 or 566-3489.

DUE to the overwhelming response to the June 7, 1988, Hazardous Waste Management Conference, the DEP and the Hazardous Waste Management Service are re-running this program on August 9, 1988. Time, place, and agenda will be the same as the original conference, as will be the \$25 registration fee. Please contact the DEP at 566-3489 if you are interested in attending.



Old plastic jugs make good containers for waste oil.

Map of the Month



There shouldn't be any reason to leave Connecticut, but if you must . . .

by
Alan Levere
 Senior Environmental Analyst

IT TOOK ME 31 YEARS to get to Cape Cod. I didn't get lost, and I got there the same day I set out — it just took me a while to get motivated. As soon as I got there, though, I knew I should have gone sooner.

I visited the Cape in early spring when there were still little pockets of snow. The weather was on the cool side but, from what I have heard, that was a great time to visit. No Traffic.

Once there, I was amazed at the diversity in the landforms, the vastness of the geologic time that was clearly evident, the vegetation, and topography — never mind the spectacular views. It was great but, the more I saw, the more I wanted to get the entire overview of the area, the big picture. That would mean obtaining topographic maps.

By chance, back home in Connecticut, right here in the office of the Natural Resources Center, I was able to piece together miscellaneous old topos and soon had the coverage I was after. What a lesson in coastal landforms I was in for. The Cape itself bends and

tapers — a function, in part, of ocean currents — and serves as a natural breakwater to protect the mainland. Its dunes and beaches combine to form the Cape Cod that we know today.

Cartographically, there are five maps that make up the National Seashore section of the Cape, the land from the elbow up to Provincetown. In some places, the topographic lines show clearly the steep slopes that form the bluffs on the eastern, Atlantic Ocean, side of the Cape. In other places, the topo lines show the easy slope down to the tidal flats on the western, bay side, from the tops of those bluffs. The highest point I could find is about 170 feet above sea level along the coast southeast of "the Highlands." But even that drops back down to the water 300 feet to the east.

The road and place names listed on the topos can't help but make you curious about past historical events. Some almost tell stories of their own, like Corn Hill Road, Oyster Pond River, and Old Wharf Point. And some just make you wonder, like Featherbed

Swamp, Aunt Lydia's Cove, and Shank Painter Pond.

BEFORE STUDYING this map, I didn't know that the Pilgrims landed here before they went on to Plymouth. You can follow a nature trail to the area they explored in search of fresh drinking water. The history of these settlers is recalled in such place names as Pilgrim Lake and Mayflower Heights.

Another bit of history took place on the eastern bluffs at the "Marconi Station." Marconi's wireless radio transmission experiments over the Atlantic were conducted from this site. Here, back in April of 1912, messages from the sinking *Titanic* were monitored.

The seemingly endless dunes are traversed by bicycle trails, old railroad grades, and jeep trails that lead mostly into, and sometimes out of, Cape Cod National Seashore. They are frequently labeled, but we know the topo map symbol for trails is a dashed line (— — —).

WE DON'T usually feature non-Connecticut maps in this column. But since the Cape is so nearby, and there is the opportunity to be exposed to many new topographic map symbols (a shipwreck, bluffs, a mile-long dike, and a variety of coastal features — extensive tidal flats and coastal marshes, barrier beaches, coves and sand bars), it seemed like a good idea for this month's column.

The map set we have available comprises five topos that cover the Cape from the elbow, starting at Nickerson State Park, right up through Race Point and Provincetown. Since generally we don't get many requests for out-of-state maps, we have only a limited supply of these outer Cape topo sets available.

The set of five maps can be ordered by sending \$15.44 to cover the maps, tax, and handling to: DEP-NRC, Map Sales, Room 555, 165 Capitol Avenue, Hartford, CT 06106



Five-Mile River between Norwalk and Darien; common sense is the underlying principle. (Photo: Christopher Reccia)

Water-Dependent Uses

There's good news and
there's bad news.

by
Arthur J. Rocque Jr.
Director
Office of
Planning/Coastal Management

WHEN ADDRESSING GROUPS on the topic of preserving water-dependent uses, I often begin with the suggestion that, in Connecticut, there's good news and there's bad news:

The good news is that Connecticut has a strong, very specific statute that assures the continuance of existing water-dependent uses without diminution.

The bad news is that Connecticut has a strong, very specific statute that assures the continuance of existing water-dependent uses without diminution.

So, if you have an interest in a water-dependent use, which is specifically defined by the Connecticut Coastal Management Act to include boatyards, marinas, and other marine-dependent activities, you can count on local, state,

and federal regulatory agencies to protect its future. Conversely, if you have an interest in a water-dependent use and wish to change it to an "upscale" use — such as condominiums and docks — you can expect a significant burden to overcome with these same regulatory agencies.

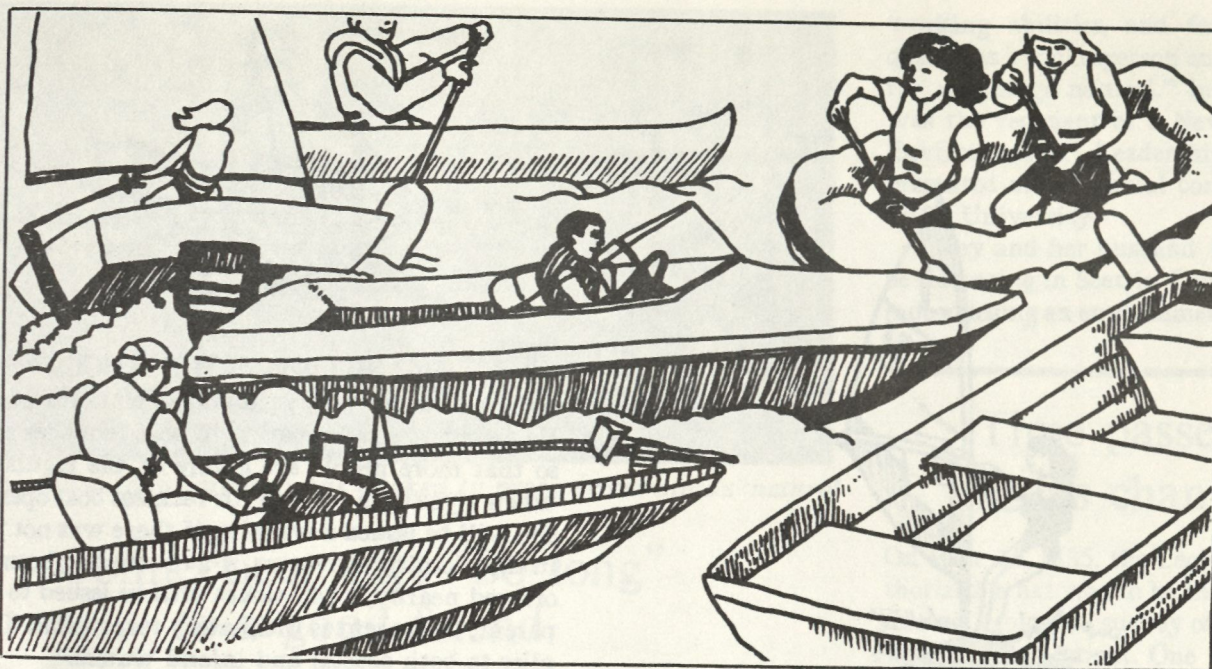
But, the Connecticut Coastal Management Act is broader than that. It also requires that for changes in use or revisions to zoning of *all* waterfront parcels, the site be evaluated for its *potential* for a water-dependent use, even if the pre-existing use is not water-dependent. Sites reasonably suited for a future water-dependent use are either to be reserved for these uses or the proposed use must be modified to meet the water-dependent use standard.

AS WITH MOST LAND USE LAWS, however, there is an escape hatch. The loophole in the water-dependent use standard is that any use can be made water-dependent if significant access is provided to the general public. So, how is this seemingly conflicting statute administered? Easy. It is based on judgement by regulators as to whether or not a reasonable balance between the water-dependent use standards, including public access, has been reached. To this end, a project is viewed in the context of the spirit and intent of the Coastal Management Act and its many specific statutory policies pertaining to boating, access, and other water-dependent uses.

Sounds like fertile ground in which to grow a lawsuit, you say? It hasn't proven so. Upon examination, one finds the Connecticut Coastal Management Act a very explicit law so that the bounds on regulatory "judgment" are relatively confining. In addition, the law has been administered using common sense as an underlying principle. For example, it seems clear that the substitution of an existing, operating, full-service boatyard for condominiums and a token public walkway around the water's edge is an unallowable diminution of a water-dependent use. Conversely, to suggest a new marina that requires a lot of in-water work (like dredging) at a waterfront location surrounded by fragile natural resources (like tidal wetlands or intertidal flats) in lieu of a reasonable upland development and public access tips the scale in the other direction.

In any case, recent surveys indicate that Connecticut, alone among states in the region, has maintained its existing water-dependent uses, sited new ones, and significantly increased the public's access to the waterfront since the passage of the Coastal Management Act. It's working and, after all, doesn't it make sense to continue to protect Connecticut's waterfront for those uses which *can't* be located elsewhere? ■

(Note: This article is reprinted from *The Law and the Land*, a publication of the Hartford law firm of Robinson and Cole.)



Volunteers Teach Connecticut Kids Safe Boating Skills

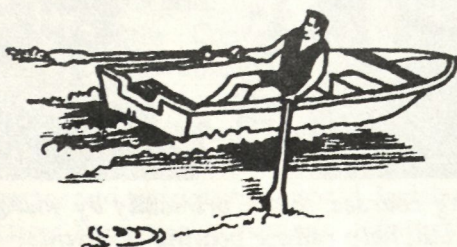
by
Margaret A. Carter
Environmental Intern

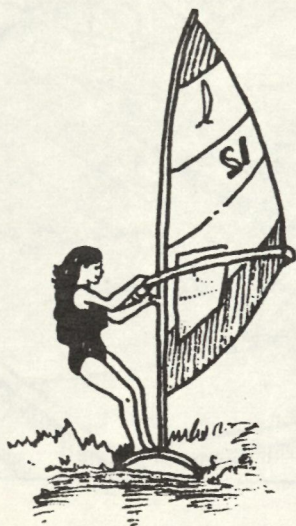
THE VOLUNTEERS ARE THE MAINSTAY of our program. Without them, boating education would be virtually non-existent in Connecticut." So says Joseph Gillis, the co-coordinator of the DEP's boating education unit. It is Gillis' responsibility to make sure that every boat operator in Connecticut under the age of 18 possesses a "State Boating Safety Certificate." Gillis sets up boating education courses throughout the state and these course are then taught by volunteers.

The course is required by state law, a direct result of the increasing popularity of boating in Connecticut. At this writing, there were 81,000 registered boats in our state. Canoes and other small boats raise that number to nearly 125,000. These large numbers reflect a 10-percent yearly growth rate in boating activity in Connecticut. And this also implies an increase in the number of boat

operators unaware of boating regulations and safety measures. Last year in the United States, a total of 1,116 people died in boating accidents. Over 25,000 were injured, and property loss exceeded 420 million dollars. Drowning is the second leading cause of accidental death in the U.S., after car accidents. The Coast Guard estimates that 75 percent of boating fatalities would be eliminated if personal flotation devices (life preservers), which are in fact required by law, were worn.

THE BOATING EDUCATION COURSE teaches safe boating practices in hope of reducing these startling statistics. The course is taken primarily by youngsters 9-18 years of age. The course is given approximately 75 times a year, and last year there were about 3,000 students. The course lasts three days and culminates in a test. A passing grade will result in the presentation of a Boating Safety Certificate by the DEP. This laminated certificate must be carried at all times when operating a boat over five horsepower in Connecticut's waters, and when not accompanied by a parent or guardian. Many adults find the courses informative, though for them it is not legally required. Many insurance companies offer reduced premiums to holders of these boating safety certificates.





TOPICS COVERED IN THE COURSE include legal requirements of boat owners, such as registration procedures and required safety equipment. Basic boating techniques, cruising, docking, knot-tying, and maintenance are covered, with first aid and safe boating skills being stressed. Other topics include weather, navigation, water sports, and sailing.

The effect of alcohol on the body, balance, and vision of the boat operator is emphasized. Drunk driving in boats is as serious as it is in land vehicles. According to U.S. Coast Guard figures, 50 percent of boating fatalities are alcohol-related.

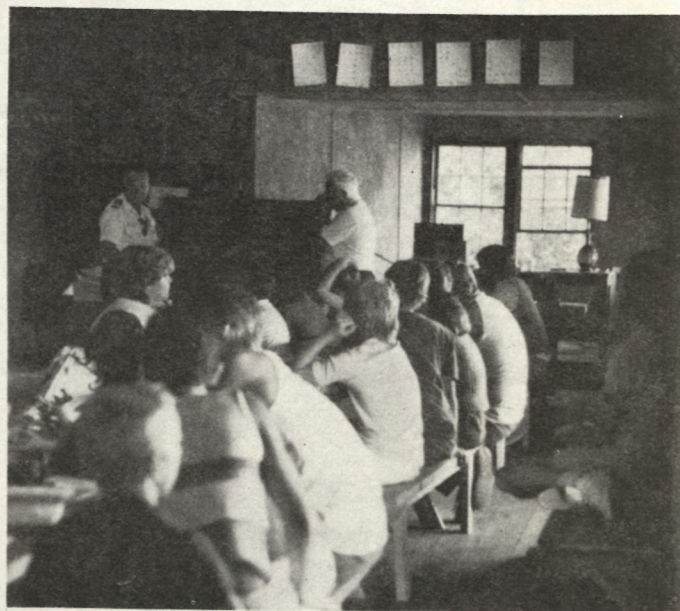
Basically, the course is a complete introduction to boating. It equips the novice boater with the general knowledge necessary for safe and appropriate boating activities in Connecticut. The information is useful whether a person is the owner/operator of the boat or just along for the ride. The secret of safe boating is to *stay* out of trouble, rather than *get* out of trouble. The operator of the boat is responsible for the safety of the boat, any passengers, and the effects of the wake of the boat on other water users.

The instructors volunteer their time because of their strong dedication to boating safety. Of the nearly 230 volunteers, 80 are regulars in the program. Most are members of the U.S. Coast Guard Auxiliary or the U.S. Power Squadron, which are national volunteer organizations of highly skilled boaters devoted to the promotion of boating safety and education. To teach the courses, it is necessary to be properly certified and highly skilled in boating, as are all members of these two organizations.

JOSEPH GILLIS IS IN THE PROCESS of initiating a course in every park and recreation area in the state. He distributes information to boat launches and marinas so that more people are aware of the regulations. Now, when a youth is stopped for reckless boat operating, he or she will be issued a warning if there was not yet a course in the vicinity. However, if a course *had* been previously offered nearby, a \$40-ticket will be issued to the youth's parent; the parent is ultimately responsible. This law applies to both coastal and inland waters.

With the increased popularity of boating, it is hoped that basic courtesy on the water will grow with education. But, boats are faster and louder now. Uses of natural waters has increased with such activities as jet skiing, parasailing, fishing, and diving, all of which create conflicts of interest on the same bodies of water. Now, more than ever, increased awareness of safety regulations will be necessary for the continued enjoyment of Connecticut's waters.

For more information on these *free* courses, or for information on initiating one in your own area, call Joseph Gillis, Boating Safety Education Unit, Marine Patrol Headquarters, 333 Ferry Road, Old Lyme, CT 06371. Phone: (203) 434-8638. ■



Boating courses, taken primarily by youngsters 9-18 years old, help reduce boating accidents.



Environmentalist Joey Corcoran has worked to preserve our state's natural resources.

Connecticut says "So long" to a good friend

by
Nancy Kriz

JOEY CORCORAN, director of environmental affairs for the Connecticut Audubon Society, will be leaving Connecticut this month. Her departure will be a great loss to the environmental community.

In 1985, Joey served as a consultant and a lobbyist for the Connecticut Audubon Society. In 1986, she became assistant director of environmental affairs and was promoted to a directorship at the close of that year's legislative session. Joey was chairman of the Environmental Caucus for two years and co-chaired the Clean Water Coalition this past year.

A graduate of Middlebury College, Joey chose a career in education and taught in the Seattle public school system, where it became evident to her that she had a major interest in the environment. In 1981, she was accepted as a graduate student at the Yale School of Forestry and Environmental Studies. "Yale provided a chance to expand what I knew of ecology and pursue an independent study of environmental education," she said.

Before joining the Connecticut Audubon Society, Joey studied seabird behavior in Quebec Province and developed educational programs for the Atlantic Center for the Environment. She was director and legislative liaison for Connecticut Preservation Action.

JOEY CORCORAN'S accomplishments at the Legislature have been monumental. She was instrumental in, among other things, the passage of the non-game wildlife program; the Recreation and Natural Heritage Trust Program; 1987 amendments to the Inland Wetlands and Watercourses Act; and legislation pertaining to recycling and pesticide notification. Additionally, Joey was a member of the Environment/2000 Advisory Committee, the Recycling Task Force, and she acted as vice chairman of the Land Conservation Coalition. She was successful in encouraging the governor to place \$20 million in his budget for state and local land acquisition projects.

Joey has won the respect of legislators and the environmental community alike. "Joey Corcoran is one of the most respected environmentalists in New England," said DEP Commissioner Leslie Carothers. "I have personally benefited from her advice and feel fortunate that I had at least one year to work with her. Seattle is lucky to get her."

In 1987, Joey received an award from the Connecticut Chapter of the Nature Conservancy "for her leadership and superior work on behalf of legislation to preserve Connecticut's natural areas, for her unequalled net-

working abilities, and for her eloquence as a spokesperson and advocate for all things natural." In 1988, she was the recipient of a New England Environmental Leadership Award presented at an annual conference at Tufts University.

Joey and her husband Peter will be relocating in Seattle. Connecticut is indeed losing an environmentalist *cum laude*. ■

Time passes, things change.

On June 15, 1835, the Legislature authorized what was to be the first systematic geological survey of the entire state of Connecticut. One result was the first state geological map of Connecticut by James Percival (published in 1842).

On June 3, 1903, the Legislature established the Connecticut Geological and Natural History Survey. In 1974, the State Geological and Natural History Survey and the Natural Resources Center of the DEP were officially merged.

The Natural Resources Center serves as a central office for collecting and distributing information about the state's physical and biological resources. The Center also develops methods of using resource information for environmental management. These activities compare favorably with the three goals set out for the State Geological and Natural History Survey back in 1903: to advance knowledge for pure science; to serve economic needs; and to educate.

The data collection movement of Percival, from 1835 to 1842, has grown into something larger and more directly functional for the state than perhaps could have been imagined by the Survey founders. In 1903, there was only one regular employee of the Survey — Superintendent William North Rice — who worked only part-time, along with the voluntary commissioners. Eighty-five years later, in 1988, the Natural Resources Center now employs about 30 people in many fields of natural resources investigations and applications. ■

ATV Laws

All-terrain vehicles and off-road motorcycles provide enjoyment for the operators and a host of problems for land managers, law enforcement officers, and land owners.

Connecticut's motor vehicle laws require that ATVs and off-road motorcycles be registered when operated on any property that is not owned or leased by the operator. A registered vehicle may be operated on private land with the permission of the landowner, on the frozen surface of some public bodies of water, and on some abandoned railroad rights-of-way. These vehicles may not be operated on any public highways (including road shoulders), state parks, or forests.

ATVs are also prohibited from municipal lands, unless written permission is obtained from the municipality. Many state parks and forests are experiencing problems associated with the illegal use of off-road vehicles. ATV trails criss-cross areas without regard to topography, soil type, stream crossings, and wildlife habitat. Fragile soils that took thousands of years to develop can be seriously disturbed in a matter of days by off-road vehicles. Frequent crossing of streams by these vehicles may accelerate siltation, thus posing a threat to fish and water quality. Off-road enthusiasts may have a detrimental impact upon threatened animals or plants in some unique ecological habitats. Other recreation user-groups, such as hikers, skiers, hunters, and fishermen, have expressed concern in regard to ATV intrusions. Private landowners also complain of the noise and damage to lawns, crops, and woodlands.

It is the owner/operator's responsibility to operate only on property that is open to ATVs, and in a safe and proper manner. At present, there are no ATV trails on DEP-owned property, so before purchasing an ATV or off-road motorcycle, consider where you will be able to legally operate the vehicle. ■

Museum of Natural History

On Sunday, July 10, from 1 to 4 p.m., a Family Day, "Snakes and Reptiles," will be held by the Connecticut State Museum of Natural History. In addition to living snakes and reptiles, there will be hands-on activities for children. This event will be held in the Jorgensen Auditorium Building at The University of Connecticut in Storrs. It is free for Museum members, \$2 for non-members.

On Saturday, July 16, the Museum will hold children's workshops titled "What You Can Do When There's Nothing To Do," led by ornithologist Winifred Burkett. One workshop for children ages five to seven will be from 10 to 11:30 a.m.; another workshop for children ages nine to 12 will be from 1 to 2:30 p.m. Both workshops will be held in the Wilbur Cross Building at The University of Connecticut in Storrs. Pre-registration is required. Fees are \$2 for Museum members, \$4 for nonmembers. For further information, call (203) 486-4460.

Beginning Monday, July 18, one- or two-week summer archaeology workshops, "Introduction to Field Archaeology Techniques," will be held at a 4,000-year-old Indian site at the Mashantucket Pequot Indian Reservation in Ledyard. The workshops will be led by Dr. Kevin McBride, director of PAST (Public Archaeology Survey Team). Continuing Education Units may be earned (3.5 per week). Registration is limited to 20 participants; the fees are \$160 for one week, \$260 for two weeks. For further information, call Kathy Brainerd, UConn Non-Credit Programs, (203) 486-3231. ■

Vernon Land Trust

In response to the rapid, unprecedented growth of development in the Vernon area, the Vernon Land Trust was recently incorporated to purchase open

space. The long range goal of the Vernon Land Trust is to preserve and protect open space, wetlands, wildlife, as well as scenic and historical sites that give Vernon its special character. The citizens of Vernon realize the present need for a balanced sense of direction for both development and preservation.

Initiated by Councilwoman Lisa Moody, members of municipal land use commissions, and members of the general public, the Vernon Land Trust will address the future of planning and development in Vernon. The Vernon Land Trust will accept donations of land that will be kept in perpetuity from development. Conservation easements can also be used to place restrictions on the use of property in exchange for certain tax advantages.

The Vernon Land Trust hopes to sponsor hikes, guest speakers, and slide shows on environmental issues as part of its agenda. Inquiries regarding membership and donations of land should be directed to Vernon Land Trust, Inc., P.O. Box 2008, Vernon, CT 06066. ■

Notes on Fish Kills

Fish kills are a common cause for concern among Connecticut residents, fishermen and non-fishermen alike. Fish dying in Connecticut's waters is often a natural event. Fish are living organisms and have surprisingly short life spans, often only from three to 10 years. When large numbers of fish die at one time, it is termed a fish kill. Although occasional fish kills can be attributed to chemical spills or pollution, the majority are natural in origin. They are usually of short duration and may only affect one or two species. Fish kills rarely exert a major impact on the total fish population. The most common types of natural fish kills are explained below.

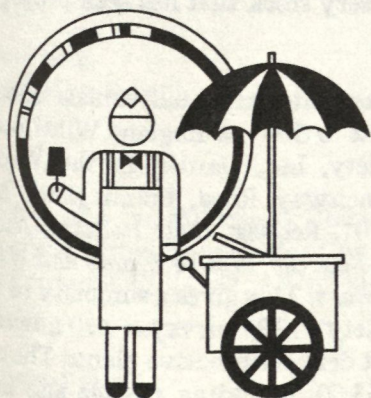
Freshwater, early spring.
Problems result from the combined

stresses of poor winter food supplies, high energy expenditures used for spawning and concentrated groups of fish on spawning grounds. Disease organisms can spread through the population rapidly, similar to the flu or common cold being passed around by children in school. Stressful events, such as the sudden onset of hot weather, can trigger localized kills.

Freshwater, summer. Most common fish kills occur on menhaden (bunker) when pursued by bluefish into shallow bays or harbors or when they enter these waters to feed. The warm harbor waters already contain low dissolved oxygen concentrations; when thousands of frantic menhaden enter the shallows, the available oxygen is quickly consumed. Asphyxiation of large numbers of menhaden ensues, even after bluefish have left the area. Conditions similar to those found in freshwater summer kills can also cause menhaden and other species fish kills in saltwater. Although local kills often appear large, effects on the overall population are negligible. ■

AIAI Events

The following films will be shown at the American Indian Archeological



Institute in Washington, Connecticut:

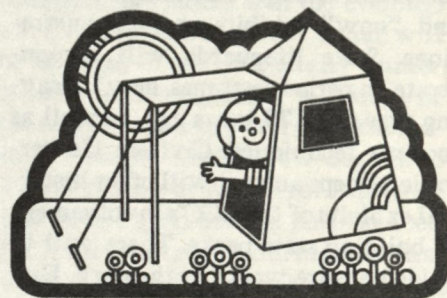
How We Learn about the Past will be shown Saturday through Monday, July 2 to 4, at 2:30 p.m. The 30-minute film presents methods of locating, excavating, and examining an archaeological site. The film shows the unearthing of Indian artifacts in the southeastern United States.

Loving Krishna (Hindu Rites) will be shown Saturday through Monday, July 9 to 11, at 2:30 p.m. This is a 40-minute color film about the sacred cult of Krishna. It examines the link between worship, art, and everyday life.

Moccasin Workshop. A workshop on making these soft-soled Algonkian-named shoes is offered Saturday, July 16, from 10 a.m. to 3 p.m., by Ken Mynter. Registration is \$20 plus \$10 for the deerskin leather. Participants will make a complete pair of moccasins. Mynter is Mahican and Mohawk and an expert in Eastern Woodland Indian crafts. To register, call (203) 868-0518.

Salt Marshes: Barrier Between Sea and Land is a 20-minute film about the value of salt marshes. The film shows them as protective and productive borders that provide food for sea animals. It also illustrates that salt marshes are resilient and able to rebuild themselves, provided they have sustained damage that is not extreme. *Powers of Ten*, a 10-minute color film, depicts the awesome range of distance in the universe by photographing a sleeping man one meter away, then backing off one power of 10 every 10 seconds until the point of view reaches beyond galaxies. The direction then changes, so the camera peers down through the man's skin cells until the nucleus of one carbon atom fills the screen. These two films will be shown Saturday through Monday, July 16 to 18, at 2:30 p.m.

Dead Birds (The Dani of New Guinea)*, will be shown Saturday through Monday, July 23-25, at 2:30 p.m. This is an 83-minute film about the lifestyle of the Dani, an agricultural people of the mountains of west-



ern New Guinea. The Dani exhibited a classic Neolithic culture with a unique emphasis on an elaborate system of intertribal warfare and revenge.

Divided Trail (Urban Chippewas) will be shown Sunday and Monday, July 31 and August 1, at 2:30 p.m. This is a 33-minute documentary about two Chippewa Indians who are encouraged by the government to leave their reservation. Having done so, they attempt to adapt to contemporary urban living. This intensely emotional film, which spans eight years of the men's lives, received an Academy Award nomination.

Admission to the AIAI is by membership or a donation of \$2/adults and \$1/children ages six to 18. AIAI is accessible to the handicapped. Senior citizens are invited to the Small World Film Festival each Monday as AIAI's guests. AIAI is located on Route 199 in Washington, Connecticut. For further information, please call (203) 868-0518. ■

CFPA Events

This summer, the Connecticut Forest and Park Association will present a series of programs, hikes, and tours in commemoration of the 75th anniversary of the Connecticut State Parks System.

August 6, Saturday, 10 a.m.-3 p.m. Rocky Neck State Park, Niantic.

75th Anniversary celebration of the Connecticut State Park System. Formal anniversary ceremony. "Then" and "now" exhibits and demonstrations. State lifeguards will demonstrate, in period costumes, how lifesaving was done 75 years ago, as well as modern techniques. Civilian Conservation Corps alumni will offer historical exhibits of the CCC's involvement in building state parks. There will be guided nature walks in the park, Dixieland music, a "Big, Big Birthday Cake," kite-flying and sand castle contests. Parking charge: \$4. Sponsored by Connecticut DEP. For further information, please call 566-2304 or 566-3489.

August 14, Sunday, 9 a.m. Macedonia Brook State Park, Kent. Seven-mile hike on the blue-blazed Macedo-

nia Ridge Trail. Climbing. Views. Bring lunch and liquid. Take Route 7 to Route 341 west. Go about one and a half miles and turn right onto Macedonia Brook Road. Meet at the picnic pavilion on the right after the camp manager's office. Co-sponsored by CFPA and Appalachian Mountain Club. Contact: Linda Rapp, 346-2372 or 349-0047.

August 21, Sunday, 8:30 a.m. Penwood State Park, Bloomfield. Hike 13 1/2 miles on the blue-blazed Metacommet Trail, Penwood State Park to Phelps Road. Rolling traprock ridges. Excellent views. Possible 10-mile option. Bring lunch and liquid. Meet at the CBT bank parking lot at the junction of Routes 20 and 87 in East Granby. Co-sponsored by CFPA and Appalachian Mountain Club. Contact:

Don Morgan, 742-8108.

August 28, Sunday, 9:00 a.m. Kettletown State Park, Southbury. Six-mile hike on the Pomperaug, Crest, and Miller Trails. Bring a bathing suit, lunch, and liquid. Meet at the ticket booth at the park entrance, exit 15 off I-84. Heavy rain cancels. Co-sponsored by CFPA and Appalachian Mountain Club. Contact: Chuck MacMath, 374-5938. ■

Correction

In the June issue of the *Citizens' Bulletin*, the position of Paul Donelly was incorrectly stated. He should have been noted as a reporter for *The New Haven Advocate*. We regret that error.

Trailside Botanizer

The Great Blue Lobelia

by
Gale W. Carter
Illustration by
Pam Carter

Like the well-known cardinal flower (*Lobelia cardinalis*), the great blue lobelia (*Lobelia syphilitica*) is another beauty. Its flower is a showy blue, but on rare occasions it may be an attractive white.

The flower has five petals which form a tube-like corolla with two lips. Its lower lip is streaked with white. There are five stamens that are fused to form a ring around the single pistil. The flowers are arranged in a crowded spike-like cluster in the upper third of the plant. This is the largest of our lobelias, sometimes reaching a height of up to four feet. The leaves are lance-shaped and usually stemless. The great blue lobelia prefers wet sites such as swamps, rich moist lowland woods, and wet meadows.



The genus name, *lobelia*, comes from Matthew Lobel, a Flemish botanist, while the species name, *syphilitica*, alludes to the early belief that the roots of the plant could cure syphilis. It was also once believed that if the leaves were smoked, they would

be useful in treating asthma and other respiratory ailments. Even as late as 1925, the roots were considered valuable for treating diarrhea and dysentery.

The great blue lobelia has value as a show of color in a moist wildflower garden during the late summer months. It should, however, be treated with caution because it contains poisonous alkaloids.

As a result of habitat destruction in recent years, there is an increased interest on the part of home owners in developing wildflower gardens. This is commendable and these plants should generally be obtained from nursery stock that has been propagated.

(Note: Interested individuals should write to the New England Wildflower Society, Inc., Garden in the Woods, Hemenway Road, Framingham, MA 01701. Request their bulletin, *Nursery Sources: Native Plants and Wildflowers*. This gives a summary of the Society's 1984 survey of 430 nurseries that deal with native plants. The cost is \$3.50, including postage and handling.) ■

The Night Sky

The Planets in Summer

by
Francine Jackson

The biggest asset for observers of the summer night sky is also the biggest liability; the long days of sunlight which warm the Earth, making night observing comfortable, allow only several hours of darkness in which to enjoy the evening's beauties. And what beauties we have this summer. Some of our old faithfuls are still available, such as the Milky Way, the faint band of light that divides the sky in half. Don't expect to see it in the city, but a quick trip into the country will make you understand why the

ancients believed it to be milk spilt by the gods up in Mount Olympus. For those of you who can't leave the bright lights, look due south. The bright whitish star you see is the planet Saturn. Saturn, which is spending almost all this year in the constellation Sagittarius, is drifting in the densest portion of the Milky Way.

Of course, like clockwork, the Perseid meteor shower is back again. Many observers feel this shower has diminished in recent years; however, its perfect placement, right in the middle of summer, makes this shower the most watched. Especially nice this August is that the best observing night is the 12th, a Friday. Also, the moon is new on the same day, so the sky will be at its darkest. Look toward the east, especially around midnight, and count how many Perseids you can see this

year.

For you insomniacs or early risers, four planets (Saturn is in the evening) can be found this summer. Venus will be brilliant in the east, totally unmistakable at a brightness hundreds of times more than any star (sun excluded, of course). Look a few degrees to Venus' right — or west — for Jupiter. If you have a good eastern horizon, look for elusive Mercury during the first weeks of July. For help, it will be near the thin crescent moons of July 11 and 12. Finally, Mars will be almost due south at 4:00 a.m. Its reddish color will make it very easy to find. This is a great year for Mars-observing, especially in September. If you have a small telescope, keep watching Mars. It will look better and better to you as summer progresses. More on Mars next month.

Letters to the Editor

Every issue of the *Bulletin* has been read by the 10 teachers in our science department, and there is always something in it for every one of us. Not only is the content of the articles interesting, but the illustrations are great.

I particularly want to compliment Caryn Allewa for her continuing good botanical drawings and Chris Rowlands for his outstanding rendering of native Americans — excellent, dramatic, dynamic, and conveying the spirit so well. "Ray Cycle" is indeed a talented and creative young man, an asset to Information and Education. Congratulations.

Jean Curtis
Berlin High School

We first saw the *Bulletin* at Dinosaur State Park, three generations of us. It's great for ages 75, 74, 42, 42, 10, eight, and six.

Raymond Pepi
Stamford

This magazine is positively wonderful. We need it badly.

Winifred C. Arnold
Groton

I find there is a lot about Connecticut in this magazine that I never knew.

Deborah N. Peckham
Milford

I enjoy all the *Citizens' Bulletins*, but I'm only going to subscribe for one year. I'm 80 years old, and I don't buy green bananas anymore.

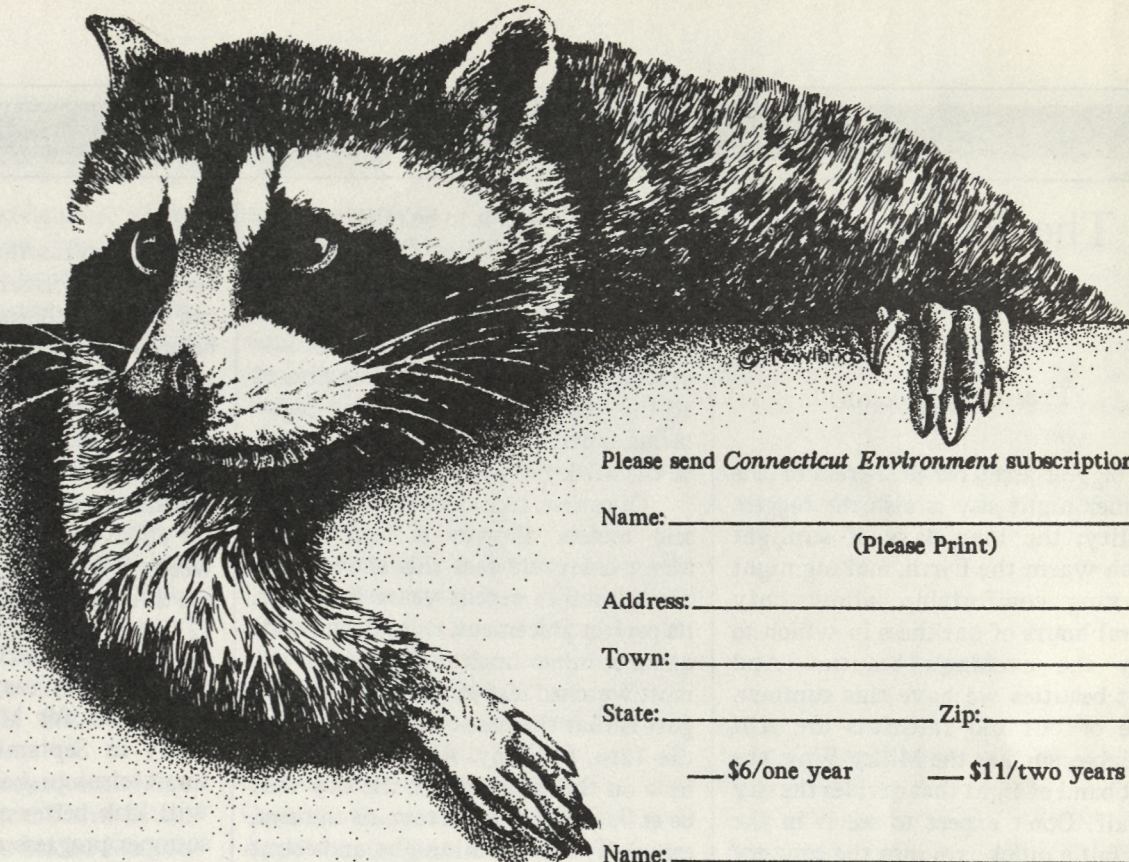
Roy Barrows
Mesa, Arizona

The Citizens' Bulletin, that is, Connecticut Environment, welcomes letters from our readers on matters of environmental interest. Please make letters no longer than 100 words. Letters will be subject to editing.

Endnote

"Long ago, I dreamed that I was a butterfly, a butterfly on the wing, and I was happy. I didn't know that I was myself, a man. Suddenly, I woke, and was once again my real self, a man. But now, I don't know if I was a man dreaming he was a butterfly, or a butterfly dreaming it was a man."

Chuang Tzu



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